

48 Volt 150 model (3000W)

eDrive compressor

Applicable models

UD150-48 V

Nominal supply:

Voltage: 42 – 54 Vdc

Power: 3000 W

Current: 62.5 A

Integrated motor safety:

Maximum continuous power consumption is 4.0 kW. If this is exceeded for a continuous period of 10 seconds, the motor is stopped, and a restart is attempted following an idle period (typically 2 minutes).

If power consumption exceeds 4.5 kW, the motor is immediately stopped, and a restart is attempted following an idle period (typically 2 minutes).

The number of restarts is limited in number, after which time operator intervention is required.

The values of 4.0 kW, 4.5 kW, and 10 seconds, can be configured to suit the application.

Maximum Continuous Current (MCC):

83.3 A @ 48 Vdc, 95.2 A @ 42 Vdc

Service Duty:

Ambient Temperature < 45°C

Ambient Temperature < 55°C (refer Unicla Operations Manual for additional requirements)

Motor Thermal Protection:

Two, independent systems provide motor thermal protection:

1. Linear PTC (embedded into stator windings). This is used to monitor the temperature of the motor. The motor is stopped at 120°C, and restarts at 90°C.
2. Triplex non-linear PTC (embedded into stator windings), connected to a dedicated circuit that disables motor operation. Motor is stopped at 130°C.

LRA (Locked Rotor Amperage):

The nature of BLDC Field Orientated Control means that a locked rotor scenario is not possible. The current, flux, and speed regulator control loops continuously monitor the operation of the motor and flag a fault condition if the motor is not rotating. Power delivery to the motor is stopped.

Enclosure class :

Enclosure class (controller housing & motor/compressor) IP55/IP68

